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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,054	07/26/2001	Joseph A. Bobier	P012676-01UT	7285

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EXAMINER

MILORD, MARCEAU

ART UNIT	PAPER NUMBER
2682	3

DATE MAILED: 10/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/916,054

Applicant(s)

BOBIER ET AL.

Examiner

Marceau Milord

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-17 is/are allowed.
- 6) ☐ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: in claim 1, line 9, the first word: "to said" should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1- 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kolanek (US Patent No 6147553) in view of Filipovic et al (US Patent No 5910752) and Midya (US Patent No 5838210).

Regarding claims 1-2, Kolanek discloses a modulated radio frequency carrier (fig. 1 and fig. 6) capable of transmitting a binary information stream made up of first and second binary states (col. 2, lines 44-54) comprising: a carrier frequency waveform made up of wavelets; and, said wavelets having been modulated in accordance with said information stream by having suppressed the amplitude of said wavelets corresponding to said first binary states of said information stream and not having suppressed the amplitude of said wavelets corresponding to said to said second binary states of said information stream (col. 3, line 44- col. 4, line 67; col. 5, line 42- col. 6, line 28; col. 6, line 29- col. 7, line 41; col. 8, line 43-67).

However, Kolanek does not specifically disclose a continuous sequence of wavelets being defined by a 360 degree cycle between crossover positions; said crossover positions representing a substantially zero energy level.

On the other hand, Filipovic, from the same field of endeavor discloses a receiver that receives, amplifies, filters, and down converts an RF signal to obtain an FM signal. The FM samples from the ADC are provided to an edge detector, which detects transitions in the FM samples. The transitions correspond to zero crossings in the FM signal. The time period between zero crossings, or the cycle width, is measured with a counter to determine the instantaneous frequency of the FM signal (col. 2, lines 4-49; col. 3, line 30- col. 4, line 65).

Midya et al also discloses a method for generating a modulated signal including a pulse modulation source, a pulse modulator for modulating a pulse signal, and a harmonic reduction filter for passing the switching frequency of the pulsed signal as the RF carrier (col. 2, lines 24-65; col. 6, line 14- col. 7, line 51). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Midya Filipovic to the modified system of Filipovic and Kolanek in order to suppress the amplitude of a cycle that results in suppressed cycle modulation.

Regarding claims 3-8, Kolanek discloses a method for transmitting binary information (fig. 1 and fig. 6) from a binary information stream over a radio frequency carrier (col. 2, lines 44-54) comprising the steps of: generating a radio frequency carrier at a select carrier frequency such that said radio frequency carrier has a waveform with wavelets with similar amplitudes; modulating said radio frequency carrier in accordance with said binary data sequence by

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suppressing the amplitude of said wavelets corresponding to said first binary states to derive first carrier binary signals and not suppressing the amplitude of said wavelets corresponding to said second binary signals to derive second carrier binary states thereby generating a suppressed cycle modulated carrier made up of said first carrier binary signals and said second carrier binary signals; and, broadcasting said suppressed cycle modulated carrier such that a suppressed cycle modulated radio frequency signal is generated (col. 3, line 44- col. 4, line 67; col. 5, line 42- col. 6, line 28; col. 6, line 29- col. 7, line 41; col. 8, line 43-67).

However, Kolanek does not specifically disclose a continuous sequence of wavelets with similar amplitudes; said wavelets being defined by a 360 degree cycle between crossover positions of said radio frequency carrier waveform; said crossover positions representing a substantially zero energy level; receiving said information stream as a binary data sequence of first and second binary states.

On the other hand, Filipovic, from the same field of endeavor discloses a receiver that receives, amplifies, filters, and down converts an RF signal to obtain an FM signal. The FM samples from the ADC are provided to an edge detector, which detects transitions in the FM samples. The transitions correspond to zero crossings in the FM signal. The time period between zero crossings, or the cycle width, is measured with a counter to determine the instantaneous frequency of the FM signal (col. 2, lines 4-49; col. 3, line 30- col. 4, line 65).

Midya et al also discloses a method for generating a modulated signal including a pulse modulation source, a pulse modulator for modulating a pulse signal, and a harmonic reduction filter for passing the switching frequency of the pulsed signal as the RF carrier (col. 2, lines 24-

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65; col. 6, line 14- col. 7, line 51). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Midya Filipovic to the modified system of Filipovic and Kolanek in order to suppress the amplitude of a cycle that results in suppressed cycle modulation.

Allowable Subject Matter

3. Claims 9-17 are allowed.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

Sanielevici et al US Patent No 6011816 discloses a demodulation circuit providing for detection of multiple zero-crossings in an FSK signal.

Griffith US Patent No 6073050 discloses an RF telemetry transmitter system including a first stage and a second stage.

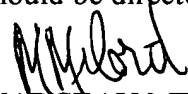
Van Horn et al US Patent No 5867064 discloses a method and apparatus for improving intermodulation in a feed-forward amplifier.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marceau Milord whose telephone number is 703-306-3023. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.


MARCEAU MILORD

Marceau Milord
Examiner
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